

DOCKET NO: 239266US3

IN THE UNITED STATES PATENT & TRADEMARK OFFICE

IN RE APPLICATION OF :
Ryo KANNO, et al. : EXAMINER: HOFFMANN, JOHN M.
SERIAL NO: 10/600,658 :
FILED: JUNE 23, 2003 : GROUP ART UNIT: 1791
FOR: METHOD AND SYSTEM FOR :
POSITIONING A GLASS PLATE,
AND METHOD AND SYSTEM
FOR BENDING A GLASS PLATE

AMENDED APPEAL BRIEF WITH APPENDICES

COMMISSIONER FOR PATENTS
ALEXANDRIA, VIRGINIA 22313

SIR:

In response to the Notice of Non-Compliant Appeal Brief mailed April 23, 2008, Appellants submit an Amended Appeal Brief. The Notice of Non-Compliant Appeal Brief indicated that the brief does not contain a concise statement of the status of all of the claims. Section III of the present Amended Appeal Brief includes a complete statement of the status of all of the claims, including a statement that Claims 2, 3, 7-10, 13-24 are canceled. Therefore, the present Amended Appeal Brief is in compliance with 37 C.F.R. § 41.37(c)(1)(iii).

The Notice of Non-Compliant Appeal Brief also indicated that the brief does not contain a concise statement of each ground of rejection presented for review. In particular, in the Notice, "it is suggested that the exact language of page 2 of the Final rejection be used." Section VI of the present Amended Appeal Brief clarifies the grounds of rejection that are to

be reviewed on appeal by reciting language that is substantially the same as the language of page 2 of the Final rejection. Therefore, the present Amended Appeal Brief is in compliance with 37 C.F.R. § 41.37(c)(1)(vi).

This is an appeal from a final Office Action Mailed October 23, 2007. A Notice of Appeal was timely filed on January 9, 2008.

I. REAL PARTY IN INTEREST

The real party in interest in this appeal is ASAHI GLASS COMPANY, LIMITED having an address at 12-1, YURAKUCHO 1-CHOME, CHIYODA-KU, TOKYO 100-8405, JAPAN. ASAHI GLASS COMPANY, LIMITED is the real party in interest by way of assignment recorded in the U.S. Patent and Trademark Office at reel 014223, frame 0840.

II. RELATED APPEALS AND INTERFERENCES

Appellants, Appellants' legal representative and the assignees are aware of no appeals or interferences which will directly affect or be directly affected by or have a bearing on the Board's decision in this appeal.

III. STATUS OF THE CLAIMS

Claims 1, 4-6, 11, 12, and 25-33 are pending. Claims 1, 4-6, 11, 12, and 25-33 stand rejected, Claims 2, 3, 7-10, 13-24 are canceled, and the rejection of Claims 1, 4-6, 11, 12, and 25-33 is herein appealed.

IV. STATUS OF THE AMENDMENTS

In a Final Office Action mailed October 23, 2007 (hereinafter "Final Action"), the Examiner finally rejected Claims 1, 4-6, 11, 12, and 25-33. No amendments to the claims have been submitted after the mailing of the Final Action. The attached Appendix VII reflects Claims 1, 4-6, 11, 12, and 25-33 as presently pending on appeal.

V. SUMMARY OF THE CLAIMED SUBJECT MATTER¹

The claimed invention, as recited in independent Claim 1, is directed to a method for positioning a glass plate. Examples of the claimed method are shown in Figures 1-6, for example. The method for positioning a glass plate includes conveying a glass plate (18) by a roller conveyor including a plurality of rollers (22, 24).² Each roller has a rolling axis. The method also includes determining a first posture of the glass plate being conveyed by the roller conveyor,³ comparing the first posture to a previously stored reference posture,⁴ and moving at least one (24A-24E) of the plurality of rollers (22, 24) in a direction substantially parallel to the rolling axis when the at least one (24A-24E) of the plurality of rollers (22, 24) is in contact with the glass plate (18) in conveyance, to position the glass plate (18) so as to conform the glass plate (18) to the previously stored reference posture.⁵ The moving the at least one (24A-24E) of the plurality of rollers (22, 24) includes moving each of the at least

¹ It is Appellants' understanding that, under the rules of Practice before the Board of Patent Appeals and Interference, 37 C.F.R. § 41.37(c) requires that a concise explanation of the subject matter recited in each independent claim be provided with reference to the specification by page and line numbers and to the drawings by reference characters. However, Appellant's compliance with such requirements anywhere in this document should in no way be interpreted as limiting the scope of the invention recited in all pending claims, but simply as non-limiting examples thereof.

² See Appellants' specification as originally filed at page 9, line 26 to page 10, line 22, for example.

³ See Appellants' specification as originally filed at page 14, line 23 to page 15, line 22, for example.

⁴ See Appellants' specification as originally filed at page 15, line 22 to page 16, line 7, for example.

⁵ See Appellants' specification as originally filed at page 16, line 8 to page 22, line 15, for example.

one (24A-24E) of the plurality of rollers (22, 24) independently with respect to each other roller of the plurality of rollers (22, 24).⁶

Claim 5 depends from independent Claim 1 and recites further features of the method. Claim 5 recites that the moving the at least one of the plurality of rollers includes independently moving at least two of the plurality of rollers in sequence one after another in conjunction with the conveyance of the glass plate.⁷

The claimed invention, as recited in independent Claim 6, is directed to a method for positioning a glass plate. Examples of the claimed method are shown in Figures 1-5 and 7, for example. The method for positioning a glass plate includes conveying a glass plate (18) by a roller conveyor including a plurality of rollers (22, 24).⁸ Each roller has a rolling axis. The method further includes determining a first posture of the glass plate being conveyed by the roller conveyor,⁹ comparing the first posture to a previously stored reference posture,¹⁰ and simultaneously moving at least two (24A-24E) of the plurality of rollers (22, 24) in a direction substantially parallel to the rolling axis when the at least two (24A-24E) of the plurality of rollers (22, 24) are in contact with the glass plate (18) in conveyance, to position the glass plate (18) so as to conform the glass plate (18) to the previously stored reference posture.¹¹

Claim 11 recites a method for bending a glass plate that includes using the method for positioning a glass plate defined in Claim 1 to position the glass plate so as to conform the

⁶ See Appellants' specification as originally filed at page 16, line 8 to page 22, line 15, for example.

⁷ See Appellants' specification as originally filed at page 16, line 8 to page 22, line 15, for example.

⁸ See Appellants' specification as originally filed at page 9, line 26 to page 10, line 22, for example.

⁹ See Appellants' specification as originally filed at page 14, line 23 to page 15, line 22, for example.

¹⁰ See Appellants' specification as originally filed at page 15, line 22 to page 16, line 7, for example.

¹¹ See Appellants' specification as originally filed at page 22, line 9 to page 23, line 4, for example.

glass plate with the previously stored reference posture, the glass plate having been heated to a glass bending temperature.¹² Claim 11 further recites bending the positioned glass plate in a desired curved shape.¹³

Claim 12 depends from independent Claim 1 and recites further features of the method. In particular, Claim 12 recites that the bending of the positioned glass plate is performed by making use of vertical movement of at least one bending roller (28).¹⁴

Claim 26 recites a method for bending a glass plate that includes using the method for positioning a glass plate defined in Claim 6 to position the glass plate so as to conform a posture of the glass plate with the previously stored reference posture, the glass plate having been heated to a glass bending temperature.¹⁵ Claim 26 further recites bending the positioned glass plate in a desired curved shape.¹⁶

Claim 27 depends from independent Claim 6 and recites further features of the method. In particular, Claim 27 recites that the bending of the positioned glass plate is performed by making use of vertical movement of at least one bending roller (28).¹⁷

The claimed invention, as recited in independent Claim 28, is directed to a method for positioning a glass plate. Examples of the claimed method are shown in Figures 1-7, for example. The method for positioning a glass plate includes conveying a glass plate (18) by a roller conveyor including a plurality of actuators (54) and a plurality of rollers (22, 24).¹⁸ Each roller has a rolling axis. The method also includes determining a first posture of the

¹² See Appellants' specification as originally filed at page 11, line 19 to page 23, line 4, for example.

¹³ See Appellants' specification as originally filed at page 9, line 26 to page 11, line 18, for example.

¹⁴ See Appellants' specification as originally filed at page 26, line 22 to page 29, line 3, for example.

¹⁵ See Appellants' specification as originally filed at page 11, line 19 to page 23, line 4, for example.

¹⁶ See Appellants' specification as originally filed at page 9, line 26 to page 11, line 18, for example.

¹⁷ See Appellants' specification as originally filed at page 26, line 22 to page 29, line 3, for example.

¹⁸ See Appellants' specification as originally filed at page 9, line 26 to page 10, line 22, and page 11, line 19 to page 13, line 24, for example.

glass plate being conveyed by the roller conveyor,¹⁹ comparing the first posture to a previously stored reference posture,²⁰ and moving at least two (24A-24E) of the plurality of rollers (22, 24) in a direction substantially parallel to the rolling axis when the at least two (24A-24E) of the plurality of rollers (22, 24) are in contact with the glass plate (18) in conveyance, to position the glass plate (18) so as to conform the glass plate to the previously stored reference posture.²¹ Each of the at least two (24A-24E) of the plurality of rollers (22, 24) is moved by a different one of the plurality of actuators (54).²²

Claim 30 depends from independent Claim 28 and recites further features of the method. In particular, Claim 30 recites that the moving the at least two (24A-24E) of the plurality of rollers (22, 24) includes independently moving the at least two (24A-24E) of the plurality of rollers (22, 24) in sequence one after another in conjunction with the conveyance of the glass plate.²³

Claim 32 recites using the method for positioning a glass plate defined in Claim 28 to position the glass plate so as to conform a posture of the glass plate with the previously stored reference posture, the glass plate having been heated to a glass bending temperature.²⁴ Claim 32 further recites bending the positioned glass plate in a desired curved shape.²⁵

¹⁹ See Appellants' specification as originally filed at page 14, line 23 to page 15, line 22, for example.

²⁰ See Appellants' specification as originally filed at page 15, line 22 to page 16, line 7, for example.

²¹ See Appellants' specification as originally filed at page 16, line 8 to page 23, line 4, for example.

²² See Appellants' specification as originally filed at page 13, lines 16-20, for example.

²³ See Appellants' specification as originally filed at page 16, line 8 to page 22, line 15, for example.

²⁴ See Appellants' specification as originally filed at page 11, line 19 to page 23, line 4, for example.

²⁵ See Appellants' specification as originally filed at page 9, line 26 to page 11, line 18, for example.

Claim 33 depends from independent Claim 28 and recites further features of the method. In particular, Claim 33 recites that the bending of the positioned glass plate is performed by making use of vertical movement of at least one bending roller (28).²⁶

VI. GROUNDS FOR REJECTION TO BE REVIEWED ON APPEAL

Whether Claims 1, 4-6, 11, 12, and 25-33 are unpatentable under 35 U.S.C. § 102(b) as anticipated by or, in the alternative, under 35 U.S.C. § 103(a) as obvious over U.S. Patent No. 5,226,942 to Letemps et al. (hereinafter "Letemps").

Whether Claims 1, 4-6, 11, 12, and 25-33 are unpatentable under 35 U.S.C. § 103(a) as obvious over Letemps.

²⁶ See Appellants' specification as originally filed at page 26, line 22 to page 29, line 3, for example.

VII. ARGUMENT

A. THE REJECTION OF CLAIMS 1, 4-6, 11, 12, and 25-33 UNDER 35 U.S.C. § 102(B) AS ANTICIPATED BY, OR IN THE ALTERNATIVE, UNDER 35 U.S.C. § 103(A) AS OBVIOUS OVER LETEMPS.

1. Claims 1 and 4.

Claim 1 relates to a method for positioning a glass plate. Claim 1 recites that the claimed method includes conveying a glass plate by a roller conveyor including a plurality of rollers. Each roller has a rolling axis. Claim 1 further recites moving at least one of the plurality of rollers in a direction substantially parallel to the rolling axis *when the at least one of the plurality of rollers is in contact with the glass plate in conveyance*, to position the glass plate so as to conform the glass plate to a previously stored reference posture. The moving the at least one of the plurality of rollers includes moving each of the at least one of the plurality of rollers *independently with respect to each other roller of the plurality of rollers*.

Turning to the applied reference, the summary of the invention of Letemps states that the inventors “propose to curve a glass sheet by bringing it through a heating furnace by a conveyor which defines a substantially horizontal transportation plane and then by having it taken over by a tool, by means of which it is curved and/or transferred to a curving and/or discharge device, the invention including in the detection of the effective position of the glass sheet and the repositioning of the taking-over tool as a function of this effective position.”²⁷ Figure 2 of Letemps illustrates a glass sheet 18, a furnace 19, a movable portion 17 (the noted taking-over tool), and a secondary cooling conveyor 20.²⁸ Letemps describes that “*the whole of this portion 17 of the conveyor [] will be realigned relative to the direction effectively*

²⁷ See Letemps, at column 2, lines 55-64.

²⁸ See Letemps, at column 7, lines 33-48.

followed by the glass sheet 18 in proximity to the exit from the furnace 19.”²⁹ However, Letemps fails to disclose moving at least one of a plurality of rollers in a direction substantially parallel to a rolling axis when the at least one of the plurality of rollers *is in contact with* a glass plate in conveyance.

As can be seen in Figure 2 of Letemps, the portion 17 is moved *prior to* the arrival of sheet 18. Indeed, the Office Action of June 22, 2007³⁰ acknowledges that, with respect to Letemps, “[t]he initial movement of the rollers occur *prior to contact with the rollers*.”³¹

Nevertheless, the Office Action of June 22, 2007 also asserts:

...it is clear that rollers are re-centered in reference to the direction of travel at some time after glass is brought in contact with the rollers. See col. 7, line 40 which indicates the realignment is in reference to moving direction. See also col. 8, lines 1-12 which indicate that the direction of rotation is relative to the straight ahead bearing – not the previous bearing - it is re-centered each time.

The Office Action of June 22, 2007 further states that:

...Letemps is silent as to when the rollers are re-centered: it must be recentered while the glass is on the rollers, or after it has left the rollers. Since there is only two options, it is deemed that Letemps reads on both.

²⁹ See Letemps, at column 7, lines 38-42.

³⁰ The Final Action does not include arguments as to how this feature is met, but references arguments made in the Office Action mailed June 22, 2007.

³¹ See the Office Action of June 22, 2007, at page 8, line 7 (emphasis added).

However, Letemps is not silent as to when re-centering takes place. Letemps states that:

...it is no longer the glass sheets which are centered relative to the curving machine, but it is this curving machine which is repositioned appropriately for each glass sheet. By definition, this process is entirely harmless for the glass sheets, which are left free in their movements in the transportation plane. Furthermore, the accuracy of the centering may be improved, because the initial position of the taking-over tool is known with great exactness, either because the preceding position was memorized or more simply because the taking-over tool is replaced *between two successive glass bodies* to a reference position corresponding, for example, to a perfect alignment.³²

Thus, Letemps describes that any re-centering that takes place occurs *between* successive glass bodies, not while one glass body or the other is still in contact with a taking-over tool (such as the portion 17). Therefore, Letemps fails to disclose moving at least one of the plurality of rollers in a direction substantially parallel to a rolling axis *when the at least one of the plurality of rollers is in contact with a glass plate in conveyance*.

The Federal Circuit stated in *Verdegaal Bros. v. Union Oil Co. of California* that “[a] claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.”³³ Letemps fails to disclose all of the features of independent Claim 1. It is respectfully requested that the rejection of independent Claim 1 under 35 U.S.C. §102(b) as anticipated by Letemps be reversed.

Moreover, if an independent claim is not anticipated under 35 U.S.C. §102, then any claim depending therefrom is also not anticipated. Claim 4 depends from independent Claim

³² See Letemps, at column 3, lines 9-25 (emphasis added).

³³ See *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987) (emphasis added).

1. As independent Claim 1 is not anticipated by Letemps, Claim 4 is not anticipated by Letemps for at least the reasons discussed above with respect to independent Claim 1.

With respect to the alternative rejection of Claims 1 and 4 under 35 U.S.C. § 103(a) as obvious over Letemps, these rejections are discussed below in Section VII(B)(1).

2. Claim 5

Claim 5 depends from Claim 1 and recites further features that are not disclosed by the cited reference. Claim 5 recites that the moving the at least one of the plurality of rollers includes *independently moving* at least two of the plurality of rollers *in sequence one after another* in conjunction with the conveyance of the glass plate.

As discussed above, Letemps describes that *a whole portion 17* of a conveyor is moved as *a single group*. As can be seen in Figure 3 of Letemps, “the movable portion 17 is *entirely mounted* on a frame 25 displaceable by means of wheels 26.”³⁴ Letemps describes that the frame 25 carries two curved members 27 and 28, with curved member 27 serving as a support for the assembly of lower rollers 29 driven in rotation by a chain 30.³⁵ Displacing the frame 25 causes the rotation of the portion 17 shown in Figure 2, thereby causing *all* of the lower rollers 29 to move *simultaneously*. Displacing multiple rollers simultaneously is not *independently moving* at least two of a plurality of rollers *in sequence one after another*.

Accordingly, Letemps fails to disclose all of the features of dependent Claim 5. It is respectfully requested that the rejection of dependent Claim 5 as anticipated by Letemps be reversed.

³⁴ See Letemps, at column 8, lines 19-22 (emphasis added).

³⁵ See Letemps, at column 8, lines 22-27.

With respect to the alternative rejection of Claim 5 under 35 U.S.C. § 103(a) as obvious over Letemps, this rejection is discussed below in Section VII(B)(2).

3. Claims 6 and 25

Claim 6 recites a method for positioning a glass plate that includes conveying a glass plate by a roller conveyor including a plurality of rollers. Each roller has a rolling axis. Claim 6 further recites simultaneously moving at least two of the plurality of rollers in a direction substantially parallel to the rolling axis *when the at least two of the plurality of rollers are in contact with the glass plate in conveyance*, to position the glass plate so as to conform the glass plate to the previously stored reference posture.

As discussed in detail above with respect to independent Claim 1, Letemps fails to disclose moving at least one of the plurality of rollers in a direction substantially parallel to a rolling axis *when the at least one of the plurality of rollers is in contact with a glass plate in conveyance*. Likewise, Letemps fails to disclose moving *at least two* of the plurality of rollers in a direction substantially parallel to the rolling axis *when the at least two of the plurality of rollers are in contact with the glass plate in conveyance*.

Accordingly, Letemps fails to disclose all of the features of independent Claim 6. It is respectfully requested that the rejection of independent Claim 6 under 35 U.S.C. § 102(b) as anticipated by Letemps be reversed.

Moreover, if an independent claim is not anticipated under 35 U.S.C. § 102, then any claim depending therefrom is also not anticipated. Claim 25 depends from independent

Claim 6. As independent Claim 6 is not anticipated by Letemps, Claim 25 is not anticipated by Letemps for at least the reasons discussed above with respect to independent Claim 6.

With respect to the alternative rejection of Claims 6 and 25 under 35 U.S.C. § 103(a) as obvious over Letemps, these rejections are discussed below in Section VII(B)(3).

4. Claim 11

Claim 11 recites a method for bending a glass plate that includes using the method for positioning a glass plate defined in Claim 1 to position the glass plate so as to conform the glass plate with the previously stored reference posture, the glass plate having been heated to a glass bending temperature. Claim 11 further recites bending *the positioned glass plate* in a desired curved shape.

By contrast, Letemps states that “it is no longer the glass sheets which are centered relative to the curving machine, but it is this curving machine which is repositioned appropriately for each glass sheet.”³⁶ Thus, while Claim 11 recites bending a glass plate in which *the glass plate* has been positioned, Letemps describes that *the curving machine* is adjusted in position for each glass plate.

Accordingly, Letemps fails to disclose all of the features of Claim 11. It is respectfully requested that the rejection of independent Claim 11 under 35 U.S.C. §102(b) as anticipated by Letemps be reversed.

With respect to the alternative rejection of Claim 11 under 35 U.S.C. § 103(a) as obvious over Letemps, this rejection is discussed below in Section VII(B)(4).

³⁶ See Letemps, at column 3, lines 9-13.

5. Claim 12

Claim 12 depends from Claim 1 and recites further features that are not disclosed by Letemps. Claim 12 depends from Claim 11, which recites, *inter alia*, bending a positioned glass plate in a desired curved shape. Claim 12 recites that the bending of the positioned glass plate is performed by making use of *vertical movement of at least one bending roller*.

Letemps describes two different methods of curving a glass plate. Neither of these methods includes making use of *vertical movement of at least one bending roller*. In the first method, shown in Figure 1 of Letemps, a glass sheet 1 is brought into contact with an upper curving mold 4 by an ascending hot gas current issuing from a lower duct 5 and escaping through a chimney 6.³⁷ As can be seen in Figure 1, the glass curving takes place without any vertical motion of any roller, much less the claimed bending roller.

In the second method, shown in Figure 3 of Letemps, the portion 17 illustrates a bed constituted of shaping rollers 29 disposed along a path having a curved profile in the direction of travel of the sheets.³⁸ As can be seen in Figure 3, none of the lower rollers 29 driven by the chain 30 are moved in *the vertical direction*.

The Office Action of June 22, 2007³⁹ states that "It is noted that the claim does not require a step of "moving" rollers vertically -thus it presumed that applicant did not intend that such a step be required." Appellants respectfully disagree with this characterization of Claim 12. Claim 12 is not defining a *further step* in addition to the bending claimed in Claim 11, but is *further defining* the step of bending recited in Claim 11. In particular, Claim 12 recites that the

³⁷ See Letemps, at column 5, lines 63-66.

³⁸ See Letemps, at column 4, lines 13-40.

³⁹ The Final Action does not include arguments as to how this feature is met, but references arguments made in the Office Action mailed June 22, 2007.

bending of the positioned glass plate is performed by making use of *vertical movement of at least one bending roller*. As note above, Letemps fails to disclose this feature.

Accordingly, Letemps fails to disclose all of the features of Claim 12. It is respectfully requested that the rejection of dependent Claim 12 under 35 U.S.C. §102(b) as anticipated by Letemps be reversed.

With respect to the alternative rejection of Claim 12 under 35 U.S.C. § 103(a) as obvious over Letemps, this rejection is discussed below in Section VII(B)(5).

6. Claim 26

Claim 26 recites a method for bending a glass plate that includes using the method for positioning a glass plate defined in Claim 6 to position the glass plate so as to conform a posture of the glass plate with the previously stored reference posture, the glass plate having been heated to a glass bending temperature. Claim 26 further recites bending *the positioned glass plate* in a desired curved shape.

By contrast, Letemps states that “it is no longer the glass sheets which are centered relative to the curving machine, but it is this curving machine which is repositioned appropriately for each glass sheet.”⁴⁰ Thus, while Claim 26 recites bending a glass plate in which *the glass plate* has been positioned, Letemps describes that *the curving machine* is adjusted in position for each glass plate.

⁴⁰ See Letemps, at column 3, lines 9-13.

Accordingly, Letemps fails to disclose all of the features of Claim 26. It is respectfully requested that the rejection of independent Claim 26 under 35 U.S.C. §102(b) as anticipated by Letemps be reversed.

With respect to the alternative rejection of Claim 26 under 35 U.S.C. § 103(a) as obvious over Letemps, this rejection is discussed below in Section VII(B)(6).

7. Claim 27

Claim 27 depends from Claim 6 and recites further features that are not disclosed by Letemps. Claim 27 depends from Claim 26, which recites, *inter alia*, bending a positioned glass plate in a desired curved shape. Claim 27 recites that the bending of the positioned glass plate is performed by making use of *vertical movement of at least one bending roller*.

As discussed above with respect to dependent Claim 12, Letemps describes two different methods of curving a glass plate, neither of which includes making use of *vertical movement of at least one bending roller*.

Accordingly, Letemps fails to disclose all of the features of Claim 27. It is respectfully requested that the rejection of dependent Claim 27 under 35 U.S.C. §102(b) as anticipated by Letemps be reversed.

With respect to the alternative rejection of Claim 27 under 35 U.S.C. § 103(a) as obvious over Letemps, this rejection is discussed below in Section VII(B)(7).

8. Claims 28, 29, and 31

Claim 28 recites a method for positioning a glass plate that includes conveying a glass plate by a roller conveyor *including a plurality of actuators* and a plurality of rollers. Each roller has a rolling axis. Claim 28 further recites moving at least two of the plurality of rollers in a direction substantially parallel to the rolling axis *when the at least two of the plurality of rollers are in contact with the glass plate in conveyance*, to position the glass plate so as to conform the glass plate to the previously stored reference posture. Each of the at least two of the plurality of rollers *is moved by a different one of the plurality of actuators*.

As discussed in detail above with respect to independent Claim 1, Letemps fails to disclose moving at least one of the plurality of rollers in a direction substantially parallel to a rolling axis *when the at least one of the plurality of rollers is in contact with a glass plate in conveyance*. Likewise, Letemps fails to disclose moving *at least two* of the plurality of rollers in a direction substantially parallel to the rolling axis *when the at least two of the plurality of rollers are in contact with the glass plate in conveyance*.

Moreover, Letemps fails to disclose or suggest the claimed plurality of actuators. As discussed above, Figure 3 of Letemps illustrates that the portion 17 of the conveyor includes an assembly of lower rollers 29 supported by a lower curved member 27 which is mounted on a frame 25. Figure 3 of Letemps also depicts a pivoting mechanism 35 and a drive mechanism 36.⁴¹ Letemps describes that “[t]he orientation of the machine to the angle α measured by the detectors 21, 22 and the computing unit is achieved by means of a pivoting mechanism 35, with which is associated a drive mechanism 36 for the pivoting.”⁴² Thus, each of rollers 29

⁴¹ See Letemps, at column 8, lines 41-52.

⁴² See Letemps, column 8, lines 41-45.

are moved by *the same two mechanisms*: the pivoting mechanism 35 and the drive mechanism 36. Moving a multiple rollers 29 with *the same two mechanisms* is not at least two of a plurality of rollers that are moved by *a different one of a plurality of actuators*.

The Final Action asserts that “[i]t is clear that there is plurality of actuators: for example the actuator that causes the frame to pivot and the actuator which causes the glass sheet to move along the conveyor via roller rolling action...If this limitation is suppose to mean that one actuator causes one roller to move, and a "different" actuator causes another roller to move: this is met because one actuator causes the translational motion of one roller, and the other actuator causes rotational motion in another roller. There is nothing which prohibits each of the actuators from moving both of the rollers.”⁴³ Appellants respectfully disagree.

The Final Action’s interpretation ignores the plain language of Claim 28. Claim 28 recites moving at least two of a plurality of rollers in a direction substantially parallel to the rolling axis, and that each of the at least two of the plurality of rollers *is moved by a different one of the plurality of actuators*. Regardless of whether an actuator which causes rotation of the rollers 29 and the pivoting mechanism 35 are interpreted as a plurality of actuators, all of the rollers 29 are rotated by the *same* actuator and all of the rollers 29 are pivoted by the *same* pivoting mechanism 35.

Letemps describes that the assembly of lower rollers 29 is driven in rotation by a chain 30.⁴⁴ As can be seen in Figure 3, the endless chain 30 ties the rotational motion of each of the rollers 29 to each other. Therefore, rotation of each of the rollers 29 is achieved by *the same* the actuator: the non-illustrated actuator that drives the chain 30. With respect to

⁴³ See the Final Action at page 3, lines 14-16.

⁴⁴ See Letemps, column 8, lines 25-27.

translational motion, as discussed above, each of rollers 29 are moved by *the same two mechanisms*: the pivoting mechanism 35 and the drive mechanism 36. Thus, Letemps fails to disclose that each of the at least two of the plurality of rollers *is moved by a different one of the plurality of actuators*.

Accordingly, Letemps fails to disclose all of the features of Claim 28. It is respectfully requested that the rejection of independent Claim 28 under 35 U.S.C. §102(b) as anticipated by Letemps be reversed.

Moreover, if an independent claim is not anticipated under 35 U.S.C. §102, then any claim depending therefrom is also not anticipated. Claims 29 and 31 depend from independent Claim 28. As independent Claim 28 is not anticipated by Letemps, Claims 29 and 31 are not anticipated by Letemps for at least the reasons discussed above with respect to independent Claim 28.

With respect to the alternative rejection of Claims 28, 29, and 31 under 35 U.S.C. § 103(a) as obvious over Letemps, these rejections are discussed below in Section VII(B)(8).

9. Claim 30

Claim 30 depends from Claim 28 and recites further features that are not disclosed by Letemps. Claim 30 recites that the moving the at least two of the plurality of rollers includes independently moving the at least two of the plurality of rollers *in sequence one after another* in conjunction with the conveyance of the glass plate.

As discussed above, Letemps describes that *a whole portion 17* of a conveyor is moved *as a single group*. Displacing multiple rollers simultaneously is not *independently moving* at least two of a plurality of rollers *in sequence one after another*.

The Final Action asserts that “it is clear that one roller would start moving (rolling) before the other because the glass rolls on the rollers sequentially. Thus it is deemed the movements are independent- because they start and end at different times.”⁴⁵ The Final Action’s characterization of Letemps is factually inaccurate. As can be seen in Figure 3 of Letemps, all of the rollers 29 are driven in rotation by the endless chain 30.⁴⁶ Therefore, rotation of all of the rollers 29 occurs *simultaneously*, and the rotation of the rollers does not occur independently and does not “start and end at different times” as asserted in the Final Action.

Moreover, Claim 30 recites that it is *the moving the at least two of the plurality of rollers* that includes the claimed independently moving. Claim 28, from which Claim 30 depends, recites moving at least two of the plurality of rollers *in a direction substantially parallel to the rolling axis*. Rotating rollers is not moving a roller in a direction substantially parallel to a rolling axis. For these reasons and those discussed above, Letemps fails to disclose that the claimed moving the at least two of the plurality of rollers includes independently moving the at least two of the plurality of rollers *in sequence one after another* in conjunction with the conveyance of the glass plate.

Accordingly, Letemps fails to disclose all of the features of Claim 30. It is respectfully requested that the rejection of dependent Claim 30 under 35 U.S.C. §102(b) as anticipated by Letemps be reversed.

⁴⁵ See the Final Action at page 3, lines 19-21.

⁴⁶ See Letemps, column 8, lines 25-27.

With respect to the alternative rejection of Claim 30 under 35 U.S.C. § 103(a) as obvious over Letemps, this rejection is discussed below in Section VII(B)(9).

10. Claim 32

Claim 32 recites using the method for positioning a glass plate defined in Claim 28 to position the glass plate so as to conform a posture of the glass plate with the previously stored reference posture, the glass plate having been heated to a glass bending temperature. Claim 32 further recites bending *the positioned glass plate* in a desired curved shape.

By contrast, Letemps states that “it is no longer the glass sheets which are centered relative to the curving machine, but it is this curving machine which is repositioned appropriately for each glass sheet.”⁴⁷ Thus, while Claim 32 recites bending a glass plate in which *the glass plate* has been positioned, Letemps describes that *the curving machine* is adjusted in position for each glass plate.

Accordingly, Letemps fails to disclose all of the features of Claim 32. It is respectfully requested that the rejection of independent Claim 32 under 35 U.S.C. §102(b) as anticipated by Letemps be reversed.

With respect to the alternative rejection of Claim 32 under 35 U.S.C. § 103(a) as obvious over Letemps, this rejection is discussed below in Section VII(B)(10).

⁴⁷ See Letemps, at column 3, lines 9-13.

11. Claim 33

Claim 33 depends from Claim 28 and recites further features that are not disclosed by Letemps. Claim 33 depends from Claim 32, which recites, *inter alia*, bending a positioned glass plate in a desired curved shape. Claim 33 recites that the bending of the positioned glass plate is performed by making use of *vertical movement of at least one bending roller*.

As discussed above with respect to dependent Claim 12, Letemps describes two different methods of curving a glass plate, neither of which includes making use of *vertical movement of at least one bending roller*.

Accordingly, Letemps fails to disclose all of the features of Claim 33. It is respectfully requested that the rejection of dependent Claim 33 under 35 U.S.C. §102(b) as anticipated by Letemps be reversed.

With respect to the alternative rejection of Claim 33 under 35 U.S.C. § 103(a) as obvious over Letemps, this rejection is discussed below in Section VII(B)(11).

B. THE REJECTION OF CLAIMS 1, 4-6, 11, 12, and 25-33 UNDER 35 U.S.C. § 103(A)
AS UNPATENTABLE OVER LETEMPS.

1. Claims 1 and 4

As discussed above in Section VII(A)(1), Letemps fails to disclose moving at least one of the plurality of rollers in a direction substantially parallel to a rolling axis *when the at least one of the plurality of rollers is in contact with a glass plate in conveyance*. The Final Action asserts that “it would have been obvious to reorient when the sheet is still on, so as to permit the sheets have substantially the same orientation for the rest of the processing.” Appellants respectfully disagree that Letemps renders the claimed method for positioning obvious for at least two reasons: (1) the Final Action fails to make a *prima facie* case of obviousness because even if, assuming *arguendo*, the method in Letemps were modified as proposed by the Final Action, such a modification would not result in the claimed method, and (2) even if a *prima facie* case of obviousness were made, Letemps teaches away from the recited moving.

It is well established that “[d]uring patent examination the PTO bears the initial burden of presenting a *prima facie* case of unpatentability.” *In re Glaug*, 283 F.3d 1335, 1338, 62 USPQ2d 1151, 1152 (Fed. Cir. 2002) (citing *In re Oetiker*, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992), and *In re Piasecki*, 745 F.2d 1468, 1472, 223 USPQ 785, 788 (Fed. Cir. 1984)). “To support the conclusion that the claimed invention is directed to obvious subject matter, either the references must expressly or impliedly suggest the claimed invention or the examiner must present a convincing line of reasoning as to why the artisan would have found the claimed invention to have been obvious in light of the teachings of the references.” *Ex parte Clapp*, 227 USPQ 972, 973 (Bd. Pat. App. & Inter. 1985). In the present case, Letemps fails to disclose all of the limitations of Claim 1, and the Final Action fails to provide a convincing line

of reasoning as to why an artisan would have found the absent claimed limitations to have been obvious in light of the teachings of Letemps.

Claim 1 recites moving at least one of the plurality of rollers in a direction substantially parallel to the rolling axis when the at least one of the plurality of rollers is in contact with the glass plate in conveyance, *to position the glass plate so as to conform the glass plate to the previously stored reference posture*. Reorienting a glass sheet while the sheet is still in contact with the portion 17 of Letemps “so as to permit the sheets have substantially the same orientation for the rest of the processing” as proposed in the Final Action is not moving at least one of the plurality of rollers in a direction substantially parallel to the rolling axis *to position the glass plate so as to conform the glass plate to the previously stored reference posture*, as recited in Claim 1. Therefore, the proposed modification of Letemps fails to disclose or suggest all of the features of Claim 1, and the Final Action fails to make a *prima facie* case of obviousness.

Moreover, even if a *prima facie* case of obviousness were made, “[e]vidence rebutting a prima face case of obviousness can include: ‘evidence of unexpected results,’ *Pfizer, Inc. v. Apotex, Inc.*, 480 F.3d 1348, 1369, 82 USPQ2d 1321, 1337 (Fed. Cir. 2007), evidence ‘that the prior art teaches away from the claimed invention in any material respect,’ *In re Peterson*, 315 F.3d 1325, 1331, 65 USPQ2d 1379, 1384 (Fed. Cir. 2003), and evidence of secondary considerations, such as commercial success and long-felt but unresolved needs, *WMS Gaming, Inc. v. Int'l Game Tech.*, 184 F.3d 1339, 1359, 51 USPQ2d 1385, 1400 (Fed. Cir. 1999).” *In re Sullivan*, 84 USPQ2d 1034, 1038 (Fed. Cir. 2007).⁴⁸ In this case, Letemps

⁴⁸ In particular, see *In re Peterson*, stating that “an applicant may rebut a prima facie case of obviousness by showing that the prior art teaches away from the claimed invention in any material respect.” *In re Peterson*, 315

teaches away from moving at least one of the plurality of rollers in a direction substantially parallel to a rolling axis *when the at least one of the plurality of rollers is in contact with a glass plate in conveyance*.

In particular, Letemps is critical of positioning systems that correct angular deviations of a conveyed glass sheet by realigning the glass sheet *while in contact with the glass sheet*:

To minimize the consequences of these angular deviations, it is therefore imperative to perform the corresponding centering virtually at the same instant as taking-over, *which is a nuisance from several aspects*. The first reason is that the operation takes place at the instant at which, as indicated above, the sensitivity to marking of the glass is at its maximum; now by definition the centering of a glass sheet requires that it shall be acted upon and touched.⁴⁹

Thus, as discussed above in Section VII(A)(1), Letemps extols the benefits of its device, which performs re-centering *between* successive glass bodies, stating that “it is no longer the glass sheets which are centered relative to the curving machine, but it is this curving machine which is repositioned appropriately for each glass sheet. By definition, this process is entirely harmless for the glass sheets, *which are left free in their movements* in the transportation plane.”⁵⁰ Therefore, it would not be obvious to move at least one of a plurality of rollers in a direction substantially parallel to a rolling axis *when the at least one of the plurality of rollers is in contact with a glass plate in conveyance* based on Letemps, because Letemps teaches away from altering the position of a glass sheet while in contact with the glass sheet. Therefore, Letemps fails to disclose or suggest all of the features of Claim 1.

F.3d 1325, 1331, 65 USPQ2d 1379, 1384 (Fed. Cir. 2003) (citing *In re Geisler*, 116 F.3d at 1469, 43 USPQ2d at 1365 (quoting *In re Malagari*, 499 F.2d at 1303, 182 USPQ at 553)).

⁴⁹ See Letemps, at column 2, lines 6-22.

⁵⁰ See Letemps, at column 3, lines 9-25 (emphasis added).

Moreover, if an independent claim is nonobvious under 35 U.S.C. §103, then any claim depending therefrom is nonobvious. *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988). Claim 4 depends from independent Claim 1. As the Final Action fails to make a *prima facie* case of obviousness in its rejection of independent Claim 1, Claim 4 is nonobvious for at least the reasons discussed above with respect to independent Claim 1.

Accordingly, it is respectfully requested that the rejection of independent Claim 1 and Claim 4 depending therefrom under 35 U.S.C. §103(a) as obvious over Letemps be reversed.

2. Claim 5

Claim 5 recites that the moving the at least one of the plurality of rollers includes *independently moving* at least two of the plurality of rollers *in sequence one after another* in conjunction with the conveyance of the glass plate. As discussed above, Letemps describes that *a whole portion 17* of a conveyor is moved as *a single group*. There is no apparent reason to modify the known elements in Letemps in the fashion recited in Claim 5. In particular, there is no apparent reason, other than hindsight in view of Appellants' claimed invention, to perform the substantial reconstruction that would necessary to separate each of the individual rollers 29 from the portion 17 and then move at least two of the rollers 29 *in sequence one after another* in conjunction with the conveyance of a glass plate.

Accordingly, Letemps fails to disclose or suggest all of the features of Claim 5. It is respectfully requested that the rejection of dependent Claim 5 under 35 U.S.C. §103(a) as obvious over Letemps be reversed.

3. Claims 6 and 25

Independent Claim 6 recites, *inter alia*, simultaneously moving at least two of the plurality of rollers in a direction substantially parallel to the rolling axis when the at least two of the plurality of rollers are in contact with the glass plate in conveyance, to position the glass plate so as to conform the glass plate to the previously stored reference posture.

As discussed above with respect in independent Claim 1, the Final Action fails to make a *prima facie* case of obviousness because even if, assuming *arguendo*, the method in Letemps were modified as proposed by the Final Action, such a modification would not result in the claimed moving at least one of the plurality of rollers in a direction substantially parallel to the rolling axis *to position the glass plate so as to conform the glass plate to the previously stored reference posture*. Likewise, the Final Action fails to make a *prima facie* case of obviousness because Letemps fails to disclose or suggest moving *at least two* of the plurality of rollers in a direction substantially parallel to the rolling axis when the at least two of the plurality of rollers are in contact with the glass plate in conveyance, *to position the glass plate so as to conform the glass plate to the previously stored reference posture*.

Moreover, as discussed above with respect to independent Claim 1, even if a *prima facie* case of obviousness were made, Letemps teaches away from teaches away from altering the position of a glass sheet while in contact with the glass sheet. Therefore it would not be obvious to moving at least two of the plurality of rollers in a direction substantially parallel to the rolling axis when the at least two of the plurality of rollers are *in contact with* the glass plate in conveyance. Therefore, Letemps fails to disclose or suggest all of the features of Claim 6.

Moreover, if an independent claim is nonobvious under 35 U.S.C. §103, then any claim depending therefrom is nonobvious. *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988). Claim 25 depends from independent Claim 6. As the Final Action fails to make a *prima facie* case of obviousness in its rejection of independent Claim 6, Claim 25 is nonobvious for at least the reasons discussed above with respect to independent Claim 6.

Accordingly, it is respectfully requested that the rejection of independent Claim 6, and Claim 25 depending therefrom, under 35 U.S.C. §103(a) as obvious over Letemps be reversed.

4. Claim 11

As discussed above in Section VII(A)(4), Claim 11 recites bending a glass plate in which *the glass plate* has been positioned, whereas Letemps describes that *the curving machine* is adjusted in position for each glass plate. Moreover, Letemps teaches away from re-positioning a glass plate. In particular, column 2, lines 6-22 describes several “harmful consequences of this contact,”⁵¹ such as marking the glass. As Letemps teaches away from the claimed method, the claimed method would not be obvious in view of Letemps.

Accordingly, Letemps fails to disclose or suggest all of the features of Claim 11. It is respectfully requested that the rejection of Claim 11 under 35 U.S.C. §103(a) as obvious over Letemps be reversed.

⁵¹ See Letemps, at column 2, lines 15-16.

5. Claim 12

As discussed above in Section VII(A)(1), Letemps fails to disclose that the bending of the positioned glass plate is performed by making use of *vertical movement of at least one bending roller*. Nevertheless, the Office Action of June 22, 2007⁵² states that:

It would have been obvious to make the Letemps apparatus by moving the rollers up and/or down. It is common knowledge that when building something, one typically needs to move things up and down to get them into a proper location. It would have been obvious to build the Letemps apparatus by lifting up and setting down the rollers. If the rollers were never moved up or down, one could have not have built the machine and thus the bending 'makes use' of the vertical movement used to make the machine.⁵³

Regardless of how the Letemps device was constructed, Claim 12 requires *the bending of the positioned glass plate is performed* by making use of *vertical movement of at least one bending roller*. In effect, the Final Action ignores the phrase “the bending of the positioned glass plate is performed” and offers a speculative interpretation of the claim limitation that includes unrelated past actions that may or may not have occurred. Under no circumstances does Letemps fairly suggest the claimed bending roller. As discussed in detail above, the performance of glass curving in Letemps does not include any vertical movement of any rollers, much less vertical movement of the claimed bending roller.

Accordingly, Letemps fails to disclose or suggest all of the features of Claim 12. It is respectfully requested that the rejection of dependent Claim 12 under 35 U.S.C. §103(a) as obvious over Letemps be reversed.

⁵² The Final Action does not include arguments as to how this feature is met, but references arguments made in the Office Action mailed June 22, 2007.

⁵³ See the Office Action of June 22, 2007.

6. Claim 26

As discussed above in Section VII(A)(6), Claim 26 recites bending a glass plate in which *the glass plate* has been positioned, whereas Letemps describes that *the curving machine* is adjusted in position for each glass plate. Moreover, Letemps teaches away from re-positioning a glass plate. In particular, column 2, lines 6-22 describes several “harmful consequences of this contact,”⁵⁴ such as marking the glass. As Letemps teaches away from the claimed method, the claimed method would not be obvious in view of Letemps.

Accordingly, Letemps fails to disclose or suggest all of the features of Claim 26. It is respectfully requested that the rejection of Claim 26 under 35 U.S.C. §103(a) as obvious over Letemps be reversed.

7. Claim 27

Claim 27 recites that the bending of the positioned glass plate is performed by making use of vertical movement of at least one bending roller. As discussed above, Letemps describes two different methods of curving a glass plate, neither of which includes making use of *vertical movement of at least one bending roller*. There is no apparent reason to modify the known elements in Letemps in the fashion recited in Claim 27. In particular, there is no apparent reason, other than hindsight in view of Appellants’ claimed invention, to perform the substantial reconstruction that would necessary to separate each of the individual rollers 29 from the portion 17 to achieve vertical movement of at least one bending roller.

⁵⁴ See Letemps, at column 2, lines 15-16.

Accordingly, Letemps fails to disclose or suggest all of the features of Claim 27. It is respectfully requested that the rejection of dependent Claim 27 under 35 U.S.C. §103(a) as obvious over Letemps be reversed.

8. Claim 28, 29, and 31

As discussed above, Letemps fails to disclose that each of the at least two of the plurality of rollers *is moved by a different one of the plurality of actuators*. The Final Action asserts that “it would have been obvious to add additional actuators to the Letemps frame to be able to move the frame to any desired location with no new or unexpected results.”⁵⁵ Appellants disagree with the Final Action’s assertion because there is no apparent reason to perform the proposed modification to Letemps. However, even assuming *arguendo* that this modification were performed, it would not result in the claimed method for positioning a glass plate.

As discussed above, all of the rollers are mounted on the frame 25, and moving the frame 25 with the pivoting mechanism 35 and the drive mechanism 36 causes all of the rollers 29 to move at the same time. Adding additional actuators to move *the frame 25* would not result in each of at least two of the rollers 29 being moved by a *different one* of the plurality of newly added actuators. Instead, such a modification would result in all of the rollers 29 being moved (together as one with the frame 25) by *the same* additional actuators. Therefore, Letemps fails to disclose or suggest all of the features of Claim 28.

Moreover, if an independent claim is nonobvious under 35 U.S.C. §103, then any claim depending therefrom is nonobvious. *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed.

⁵⁵ See the Final Action at page 6, lines 1-3.

Cir. 1988). Claims 29 and 31 depend from independent Claim 28. As the Final Action fails to make a *prima facie* case of obviousness in its rejection of independent Claim 28, Claims 29 and 31 are nonobvious for at least the reasons discussed above with respect to independent Claim 28.

Accordingly, it is respectfully requested that the rejection of independent Claim 28, and Claims 29, and 31 depending therefrom, under 35 U.S.C. §103(a) as obvious over Letemps be reversed.

9. Claim 30

Claim 30 depends from Claim 28 and recites that the moving the at least two of the plurality of rollers includes independently moving the at least two of the plurality of rollers in sequence one after another in conjunction with the conveyance of the glass plate. As discussed above, Letemps describes that *a whole portion 17* of a conveyor is moved as *a single group*. There is no apparent reason to modify the known elements in Letemps in the fashion recited in Claim 30. In particular, there is no apparent reason, other than hindsight in view of Appellants' claimed invention, to perform the substantial reconstruction that would necessary to separate each of the individual rollers 29 from the portion 17 and then move at least two of the rollers 29 *in sequence one after another* in conjunction with the conveyance of a glass plate.

Accordingly, Letemps fails to disclose or suggest all of the features of Claim 30. It is respectfully requested that the rejection of dependent Claim 30 under 35 U.S.C. §103(a) as obvious over Letemps be reversed.

10. Claim 32

As discussed above in Section VII(A)(10), Claim 32 recites bending a glass plate in which *the glass plate* has been positioned, whereas Letemps describes that *the curving machine* is adjusted in position for each glass plate. Moreover, Letemps teaches away from re-positioning a glass plate. In particular, column 2, lines 6-22 describes several “harmful consequences of this contact,”⁵⁶ such as marking the glass. As Letemps teaches away from the claimed method, the claimed method would not be obvious in view of Letemps.

Accordingly, Letemps fails to disclose or suggest all of the features of Claim 32. It is respectfully requested that the rejection of Claim 32 under 35 U.S.C. §103(a) as obvious over Letemps be reversed.

11. Claim 33

Claim 33 recites that the bending of the positioned glass plate is performed by making use of vertical movement of at least one bending roller. As discussed above, Letemps describes two different methods of curving a glass plate, neither of which includes making use of *vertical movement of at least one bending roller*. There is no apparent reason to modify the known elements in Letemps in the fashion recited in Claim 33. In particular, there is no apparent reason, other than hindsight in view of Appellants’ claimed invention, to perform the substantial reconstruction that would necessary to separate each of the individual rollers 29 from the portion 17 to achieve vertical movement of at least one bending roller.

⁵⁶ See Letemps, at column 2, lines 15-16.

Accordingly, Letemps fails to disclose or suggest all of the features of Claim 33. It is respectfully requested that the rejection of dependent Claim 33 under 35 U.S.C. §103(a) as obvious over Letemps be reversed.

C. CONCLUSION

In view of the foregoing, it is respectfully submitted that the cited references, whether considered alone or in combination, fail to disclose or suggest the combined features set forth in Claims 1, 4-6, 11, 12, and 25-33. Accordingly, it is respectfully requested that the rejections of Claims 1, 4-6, 11, 12, and 25-33 be reversed.

Respectfully submitted,

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VIII. CLAIMS APPENDIX

Claim 1 (Rejected): A method for positioning a glass plate, comprising:

conveying a glass plate by a roller conveyor including a plurality of rollers, each roller having a rolling axis;

determining a first posture of the glass plate being conveyed by the roller conveyor;

comparing the first posture to a previously stored reference posture; and

moving at least one of the plurality of rollers in a direction substantially parallel to the rolling axis when the at least one of the plurality of rollers is in contact with the glass plate in conveyance, to position the glass plate so as to conform the glass plate to the previously stored reference posture,

wherein the moving the at least one of the plurality of rollers includes moving each of the at least one of the plurality of rollers independently with respect to each other roller of the plurality of rollers.

Claims 2-3 (Canceled).

Claim 4 (Rejected): The method according to Claim 1, wherein the determining the first posture includes

using an imaging means to capture an image of the glass plate being conveyed by the roller conveyor, and

recognizing the first posture of the glass plate based on the captured image of the glass plate;

wherein the comparing the first posture to the previously stored reference posture includes

comparing the recognized first posture with the previously stored reference posture to find a deviation amount of the posture of the glass plate with respect to the previously stored reference posture, and

finding an axial displacement amount to be applied to the at least one of the plurality rollers that is in contact with the glass plate based on the found deviation amount; and

wherein the moving the at least one of the plurality of rollers includes moving the at least one of the plurality rollers that is in contact with the glass plate in accordance with the found axial displacement amount.

Claim 5 (Rejected): The method according to Claim 1, wherein the moving the at least one of the plurality of rollers includes independently moving at least two of the plurality of rollers in sequence one after another in conjunction with the conveyance of the glass plate.

Claim 6 (Rejected): A method for positioning a glass plate, comprising:
conveying a glass plate by a roller conveyor including a plurality of rollers, each roller having a rolling axis;
determining a first posture of the glass plate being conveyed by the roller conveyor;
comparing the first posture to a previously stored reference posture; and

simultaneously moving at least two of the plurality of rollers in a direction substantially parallel to the rolling axis when the at least two of the plurality of rollers are in contact with the glass plate in conveyance, to position the glass plate so as to conform the glass plate to the previously stored reference posture.

Claims 7-10 (Canceled).

Claim 11 (Rejected): A method for bending a glass plate, comprising:
using the method for positioning a glass plate defined in Claim 1 to position the glass plate so as to conform the glass plate with the previously stored reference posture, the glass plate having been heated to a glass bending temperature; and
bending the positioned glass plate in a desired curved shape.

Claim 12 (Rejected): The method according to Claim 11, wherein the bending of the positioned glass plate is performed by making use of vertical movement of at least one bending roller.

Claims 13-24 (Canceled).

Claim 25 (Rejected): The method according to Claim 6,
wherein the determining the first posture includes

using an imaging means to capture an image of the glass plate being conveyed by the roller conveyor, and

recognizing the first posture of the glass plate based on the captured image of the glass plate;

wherein the comparing the first posture to the previously stored reference posture includes

comparing the recognized first posture with the previously stored reference posture to find a deviation amount of the posture of the glass plate with respect to the previously stored reference posture, and

finding an axial displacement amount to be applied to the at least two of the plurality rollers that are in contact with the glass plate based on the found deviation amount; and

wherein the moving the at least two of the plurality of rollers includes moving the at least two of the plurality rollers that are in contact with the glass plate in accordance with the found axial displacement amount.

Claim 26 (Rejected): A method for bending a glass plate, comprising:

using the method for positioning a glass plate defined in Claim 6 to position the glass plate so as to conform a posture of the glass plate with the previously stored reference posture, the glass plate having been heated to a glass bending temperature; and

bending the positioned glass plate in a desired curved shape.

Claim 27 (Rejected): The method according to Claim 26, wherein the bending of the positioned glass plate is performed by making use of vertical movement of at least one bending roller.

Claim 28 (Rejected): A method for positioning a glass plate, comprising:
conveying a glass plate by a roller conveyor including a plurality of actuators and a plurality of rollers, each roller having a rolling axis;
determining a first posture of the glass plate being conveyed by the roller conveyor;
comparing the first posture to a previously stored reference posture; and
moving at least two of the plurality of rollers in a direction substantially parallel to the rolling axis when the at least two of the plurality of rollers are in contact with the glass plate in conveyance, to position the glass plate so as to conform the glass plate to the previously stored reference posture,
wherein each of the at least two of the plurality of rollers is moved by a different one of the plurality of actuators.

Claim 29 (Rejected): The method according to Claim 28, wherein the determining the first posture includes
using an imaging means to capture an image of the glass plate being conveyed by the roller conveyor, and
recognizing the first posture of the glass plate based on the captured image of the glass plate;

wherein the comparing the first posture to the previously stored reference posture includes

comparing the recognized first posture with the previously stored reference posture to find a deviation amount of the posture of the glass plate with respect to the previously stored reference posture, and

and finding an axial displacement amount to be applied to the at least two of the plurality rollers that are in contact with the glass plate based on the found deviation amount; and

wherein the moving the at least two of the plurality of rollers includes moving the at least two of the plurality rollers in accordance with the found axial displacement amount.

Claim 30 (Rejected): The method according to Claim 28, wherein the moving the at least two of the plurality of rollers includes independently moving the at least two of the plurality of rollers in sequence one after another in conjunction with the conveyance of the glass plate.

Claim 31 (Rejected): The method according to Claim 28, wherein the moving the at least two of the plurality of rollers includes simultaneously moving the at least two of the plurality of rollers.

Claim 32 (Rejected): A method for bending a glass plate, comprising:
using the method for positioning a glass plate defined in Claim 28 to position the glass plate so as to conform a posture of the glass plate with the previously stored reference posture, the glass plate having been heated to a glass bending temperature; and
bending the positioned glass plate in a desired curved shape.

Claim 33 (Rejected): The method according to Claim 32, wherein the bending of the positioned glass plate is performed by making use of vertical movement of at least one bending roller.

IX. EVIDENCE APPENDIX

None.

X. RELATED PROCEEDINGS APPENDIX

None.